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EXAMINER

HU, KANG

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/730,095	Applicant(s) TSUKAMOTO ET AL.	
	Examiner KANG HU	Art Unit 3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3715

DETAILED ACTION

Present office action is in response to amendment filed on 6/19/2009, claims 20-25 have been added, claims 6-25 are currently pending in the application.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 13-25 are rejected under USC 101, the claimed invention is directed to non-statutory subject matter. In order for a claimed process to be considered statutory it must be: (1) tied to a particular machine or apparatus, or (2) transform a particular article into a different state or thing. The use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility; the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity; and the transformation must be central to the purpose of the claimed process. A showing of a physical transformation requires an actual change in the state of a physical object involved in the process, such as a method for curing rubber. The pending claims are not drawn to such a process and therefor do not qualify as statutory subject matter under this prong of the test. Therefor the claimed method must be tied to a particular machine or apparatus. With respect to claim 13, the claim recite "storing karaoke contents, play sound responsive to song data, generating an interrupt signal responsive to the synchronization data embedded within the song data, and executing the karaoke events in accordance with the karaoke event data in time order in synchronization responsive to generation of the interrupt signal"; These are merely nominal

Art Unit: 3715

recitations that do not make any implicit or explicit recitations of a particular machine which is critically tied to the performance of the method. Claim 20 recites the limitations of "storing karaoke contents in a memory, playing sound responsive to the song data and generating an interrupt signal responsive to the synchronization data embedded within the song data, using a sound generator, and executing the karaoke events using a multimedia processor." Although claim 20 recites storing karaoke contents in a memory, playing sound using a sound generator and executing karaoke events using a multimedia processor. These features do not impart meaningful limitation on the scope of the claim as it merely provides intended use of data structure, the limitation does not recite a particular machine which is critically tied to the performance of the method. It merely uses computer componentry, but does not show that the computer performs any of the functions. The applicant is suggested to positively recite a particular machine which is critically tied to the performance of the method as supported by the specification.

Claims 14-19 and 21-25 are rejected for its dependency upon claims 13 and 20 for failing to correct these deficiencies. As such, they are rejected for the same reason.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 3715

4. Claims 6-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Naples et al. (US 2002/0162445 A1)

Re claim 6, Naples discloses a mobile karaoke device comprising: a memory (Fig 1A, Server 30 and shared storage 30a) that stores karaoke contents including karaoke event data in time order and song data, the song data having synchronization data embedded therein, and the karaoke event data being representative of karaoke events (¶ 5, 48: a data file contains a standardized performance of music or sound digitally encoded... methods for digitally encoding the sound include digital recordings or samples in a format such as mp3, as well as synthesizer parameters in a format such as MIDI. The standardized performance is encoded in one or more parts that can be played back synchronously by an interactive karaoke system; ¶ 49, the data files contains additional content such as timing cues, lyrics, and other features. The additional content is time-correlated tot the audio content for synchronous playback);

a sound generator that plays sound responsive to the song data (fig 1A, audio output subsystem responsive to output by the system logic);

and a multimedia processor that provides the song data to said sound generator, and that executes karaoke events according to the karaoke event data (¶ 112, a client device executes system logic of karaoke system. In this embodiment, client device is a personal computer. Client device includes main memory, storage, and a processor, interconnected by a bus; ¶ 126 and 127: OS services include device drivers, a graphics applications programming interface, an audio mixer API, and a file system. The graphics API use visual display device, audio mixer enables system to use audio output subsystem; third party services include an audio synthesizer. Audio synthesizer can read a MIDI stream and render it as audio via audio output subsystem).

Art Unit: 3715

said sound generator responding to receipt of the synchronization data embedded within the song data by sending an interrupt signal to said multimedia processor, said multimedia processor executing the karaoke events in accordance with the karaoke event data in time order in synchronization responsive to receipt of the interrupt signal (¶ 10: the synthesizer control data is MIDI data. The virtual instrument pool includes cue data that specifies prompts coordinated with the audio content the interactive part; ¶ 48: The standardized performance is encoded in one or more parts that can be played back synchronously by an interactive karaoke system; ¶ 49: the data file contains additional content such as timing cues, lyrics, and other features... the additional content is time-correlated to the audio content for synchronous playback; ¶ 57: system logic includes procedures encoded as instructions that can be carried out by a processing device... system logic includes a player application and an engine library; ¶ 164: live interactive playback process instructs performance object to begin playback processing. Playback processing then instructs virtual instrument objects each to begin user input processing).

Re claim 7, memory stores the karaoke event data is in groups which are each time ordered (¶ 49: each song includes a set of instructions for time-correlated to the audio content for synchronous playback).

Re claim 8, the multimedia processor divides the karaoke event data into a number of event zones by executing a reset event (different songs within the system, when the user is ready to play a song, the song is selected, loaded and played as explained in ¶ 156-158, when the user

Art Unit: 3715

is ready to play a different song, a new set of data is loaded and the previous is erased from the system; or ¶ 98: the timing (both the start and duration) of the cue interval has several functions. It shows when a prompt should be displayed to the user).

Re claim 9, memory stores text data as the karaoke event data, the text data representative of text to be displayed by the mobile karaoke device (¶ 186: cue display can prompt the user with lyrics).

Re claims 10 and 11, the memory stores picture data as the karaoke event data, the picture data (claim 10) representative of a picture to be displayed by the mobile karaoke device and video data (claim 11) representative of video to be played by the mobile karaoke device (¶ 107, video track provides interactive visuals synchronized to the live performance. Video track includes a time-encoded series of visual frames for system to present to user in response to user interaction. For instance, automated music training can benefit from video response. Video track can include a stock series of pictures or movies).

Re claim 12, the karaoke event data is audio data representative of audio to be played (¶ 49, the additional content is time-correlated to the audio content for synchronous playback).

Re claims 13 and 20, Naples teaches similar recitations of method for storing karaoke contents similar to claim 1, the citations from claim 1 are incorporated herein in addition to particular citations provided here. Naples teaches a mobile karaoke service method comprising:

Art Unit: 3715

storing karaoke contents including karaoke event data in time order and song data (§ 48, 49:

“The standardized performance is encoded in one or more parts that can be played back synchronously by an interactive karaoke system. For instance, the standardized performance can be a song or musical performance, with various parts allocated to musicians and their vocals or instruments. The data file contains additional content such as timing cues, lyrics, and other features”), the song data having synchronization data embedded therein, and the karaoke event data being representative of karaoke events (§ 49 “the additional content is time-correlated to the audio content for synchronous playback”);

playing sound responsive to the song data (§ 48: The standardized performance is encoded in one or more parts that can be played back synchronously by an interactive karaoke system);

generating an interrupt signal responsive to the synchronization data embedded within the song data is broadly described as methods of playing MIDI data by Naples (Fig 16 shows MIDI mapping playback process, as § 5 generally explains how MIDI is used, “MIDI was designed for the recording and playback of digital audio content on synthesizers. MIDI streams do not represent audio content directly but provided information about how the content is to be synthesized. MIDI streams are multi-track, where each track can be mapped to a discrete profile such as musical instrument. Each track of the MIDI stream includes the discrete notes to be played by that instrument. Since a MIDI file is the computer equivalent of traditional sheet music for a particular song ...”; § 48: The standardized performance is encoded in one or more parts that can be played back synchronously by an interactive karaoke system; § 49: the data file contains additional content such as timing cues, lyrics, and other features... the additional

Art Unit: 3715

content is time-correlated to the audio content for synchronous playback; ¶ 57: system logic includes procedures encoded as instructions that can be carried out by a processing device... system logic includes a player application and an engine library; ¶ 164: live interactive playback process instructs performance object to being playback processing. Playback processing then instructs virtual instrument objects each to being user input processing).

Re claims 14 and 21, the karaoke event data is in groups which are each time ordered (¶ 49 each song includes a set of instructions for time-correlated to the audio content for synchronous playback).

Re claim 15, the karaoke event data is divided into a number of event zones by executing a reset event (different songs within the system, when the user is ready to play a song, the song is selected, loaded and played as explained in ¶ 156-158, when the user is ready to play a different song, a new set of data is loaded and the previous is erased from the system).

Re claims 16 and 22, the karaoke event data is text data representative of text to be displayed (¶ 186, cue display can prompt the user with lyrics).

Re claims 17 and 23, the karaoke event data is a picture data representative of a picture to be displayed (¶ 107, video track provides interactive visuals synchronized to the live performance. Video track includes a time-encoded series of visual frames for system to present

Art Unit: 3715

to user in response to user interaction. For instance, automated music training can benefit from video response. Video track can include a stock series of pictures or movies.”)

Re claims 18 and 24, the karaoke event data is video data representative of video to displayed (cited above in claim 17, ¶ 107).

Re claims 19 and 25, the karaoke event data is audio data representative of audio to be played (¶ 49, the additional content is time-correlated to the audio content for synchronous playback).

Response to Arguments

Applicant's arguments filed 6/19/2009 have been fully considered but they are not persuasive.

101 Rejection

The standard of rejection being applied against the claims is found in the decisions rendered by the courts which have defined what is not considered patent eligible subject matter. With respect to the method claims 13-19, the court of Appeals of the Federal Circuit in *In re Bilski*, (545 F.3d 943, 88 USPQ2d 1385 (Fed. Cir. 2008)) held that in order for a process claim to be considered statutory the claims must be: (1) tied to a particular machine or apparatus, or (2) transform a particular article into a different state or thing. This is the standard applied to the method claims in the rejection above.

Art Unit: 3715

The applicant asserts that "claim 13 transforms a particular article, thus should be considered patent-eligible subject matter ", the examiner respectfully disagree, a showing of a physical transformation requires an actual change in the state of a physical object involved in the process, such as a method for curing rubber etc. The applicant's assertion of such real world objects "karaoke contents, karaoke event data, and interrupt signals" are merely data structures and does not represent a physical object, the U.S. Supreme Court holds that physical and chemical process for molding precision synthetic rubber products falls within Section 101 categories of possibly patentable subject matter; such industrial processes are type that have historically been eligible to receive protection of our patent laws. *Diamond, Commissioner of Patents and Trademarks v. Diehr and Lutton*, 209 USPQ 1 (U.S. 1981).

Conclusion that physical and chemical process for molding precision synthetic rubber products falls within Section 101 categories of possibly patentable subject matter is not **altered** by fact that in several steps of process mathematical equation and programmed digital computer are used; however, there are limits to Section 101 and every discovery is not embraced within statutory terms; excluded from such patent protection are laws of nature, physical phenomena, and abstract ideas; idea of itself is not patentable; principle in abstract is fundamental truth, original cause, and motive, and these cannot be patented, as no one can claim in any of them exclusive right. *Diamond, Commissioner of Patents and Trademarks v. Diehr and Lutton*, 209 USPQ 1 (U.S. 1981).

Art Unit: 3715

With respect to claim 13, the applicant claims transforming song data into sound, generating an interrupt signal responsive to synchronization data embedded within the song data, and executing karaoke events in accordance with the karaoke event data in time order in synchronization responsive to generation of the interrupt data. A sound is merely a change in pressure in a medium, and interrupt signals and karaoke events are merely manipulation of data structures, and not physical transformations that require an actual change in the state of a physical object involved in the process, such as curing rubber, and therefore it would not be considered as transforming a particular article in compliance with the machine-or-transformation test set forth in *Re Bilski*.

The applicant further asserts that data are stored as karaoke event data, and therefore the claim specifically depicts of a physical object, and transformation of the karaoke event data into executed karaoke events is not merely insignificant extra solution activity. The examiner respectfully disagree, applicant's specification, page 4, lines 18-20 recites "the multimedia process can control event occurring timing and can execute events in time sequence according to the interruption occurred by messages embedded in song data", the karaoke event data as defined by the applicant is not a physical object, therefore the claim does not recite a particular machine which is critically tied to the performance of the method.

102(e) Rejection:

The applicant asserts that Naples does not teach having a "memory that stores karaoke contents including karaoke event data in time order and song data, the song data having synchronization

Art Unit: 3715

data embedded within", the examiner respectfully disagree. Specifically citing paragraph 5 of Naples, of the MIDI feature as disclosed. The paragraph is reproduced herein:

MIDI was designed for the recording and playback of digital audio content on synthesizers. MIDI streams do not represent audio content directly but provide information about how the content is to be synthesized. MIDI streams are multi-track, where each track can be mapped to a discrete profile such as a musical instrument. Each track of the MIDI stream includes the discrete notes to be played by that instrument. Since a MIDI file is the computer equivalent of traditional sheet music for a particular song (figuratively speaking, as opposed to the sound recording for the song itself, these files tend to be small and compact when compared to files which record the audio content directly and continuously. However, MIDI streams typically require some form of wave table or FM synthesizer chip to generate their sounds. Additionally, MIDI files tend to lack the richness and robustness of actual sound recordings of the same content.

Naples explicitly teaches that MIDI streams do not represent audio content directly but provide information about how the content is to be synthesized, also MIDI streams are multi-tracked, each track is mapped to a discrete profile such as a musical instrument. Naples makes the analogy of comparing MIDI to a sheet music, in a song played by a single or multiple instruments, the sheet music not only provides the notes each of the instrument is playing, but also the synchronized timing of when each of the notes is played (how the content is to be synthesized). Therefore Naples teaches at least providing a memory that stores karaoke contents including karaoke event data in time order and song data, the song data having synchronization data embedded within.

Additionally, Naples also teaches in paragraph 48, a data file contains a standardized performance of music or sound digitally encoded... methods for digitally encoding the sound include digital recordings or samples in a format such as mp3, as well as synthesizer parameters

Art Unit: 3715

in a format such as MIDI. The standardized performance is encoded in one or more parts that can be played back synchronously by an interactive karaoke system. This further provides evidence that karaoke contents including karaoke event data in time order and song data having synchronization data are taught by Naples. The examiner has cited particular columns and line numbers (paragraphs) in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

The applicant further asserts that the sections cited by the examiner failed to teach at least synchronization data, synchronization data embedded within song data, or an interrupt signal. The examiner respectfully disagrees. The teachings of synchronization data, and synchronization data embedded within song data have been described above and not repeated herein. The examiner previously cited paragraphs 10, 48 and figure 15A. The applicant did not address the features as taught by each of the cited section, instead relies upon fig 12A, and paragraph 181. The features of claim 6 are specifically taught in paragraphs 10, 48 and 15A, and reinforced by the applicant's citation of paragraph 181 and fig 12A in relation to provide teachings of claimed features. Specifically the user is being visually prompted with stimuli during a live performance according to the timing indicia in cue track to perform the instruments assigned. Therefore the multimedia processor executes the karaoke events (at least the cue displays to various users) in

Art Unit: 3715

accordance to the karaoke event data in time order and in synchronization response to receipt of the interrupt signal.

The applicant's argument on pages 18-22 have been carefully considered, the examiner has addressed the same argument above and not repeated herein, the applicant further argues that the examiner's construction of an hypothetical conductor could not be construed as sending an interrupt signal to a multimedia processor. The examiner acknowledges that there's no conductor within the teachings of Naples and such a "conductor" is simply an analogy to convey the functions of the system.

The newly added limitations of claims 20-25 have been addressed in the rejection and not repeated herein.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 3715

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KANG HU whose telephone number is (571)270-1344. The examiner can normally be reached on 8-5 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on 571-262-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kathleen Mosser/
Primary Examiner, Art Unit 3715

/K. H./
Examiner, Art Unit 3715